

Appliance Standards Awareness Project
American Council for an Energy-Efficient Economy

August 15, 2022

Ann Bailey
Director, ENERGY STAR Product Labeling
U.S. Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: ENERGY STAR® Most Efficient 2022 Update and 2023 Proposed Criteria

Dear Ms. Bailey,

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP) and the American Council for an Energy-Efficient Economy (ACEEE) on the Energy Star Most Efficient (ESME) 2023 recognition criteria released on July 12, 2022. We appreciate the opportunity to comment.

We support the addition of room air cleaners (RACLs) to the scope of the ESME specification as well as the proposed efficiency criteria. Given the rapid increase in shipments of RACLs in recent years and their large per-unit energy consumption, we believe that there is significant value in adding RACLs to the ESME portfolio. In the absence of federal efficiency requirements, several states have adopted minimum efficiency standards for RACLs that are generally equivalent to the previous ENERGY STAR v1.2 specification criteria.¹ In October 2020, the current specification (v2.0), which set efficiency thresholds based on smoke-free clean air delivery rate per watt (CADR/W), took effect. There are units currently certified to ENERGY STAR that far exceed the minimum efficiency performance requirements in v2.0. Across CADR bins, the most efficient unit delivers more than 5 times the smoke-free CADR per watt than a unit just meeting the current ENERGY STAR specification.² The inclusion of RACLs in the scope of ESME 2023 will allow these models with superior performance to be easily identified by consumers.³

We also encourage EPA to consider a sound level reporting requirement similar to that in the ENERGY STAR specification for room air conditioners.⁴ EPA has estimated that RACLs are in active mode 16 hours per day (with 8 hours per day in standby mode). With such significant runtimes, sound disclosure could

¹ <https://appliance-standards.org/product/air-purifiers>

²The ratio of the smoke-free CADR/W of the most-efficient unit in the ENERGY STAR database to the ENERGY STAR v2.0 minimum CADR/W criteria is as follows: 5.42, 5.75, and 5.10 for $30 \leq \text{CADR} < 100$, $100 \leq \text{CADR} < 150$, and $\text{CADR} \geq 150$, respectively.

³EPA's proposed ESME 2023 criteria represents about 10% of the models currently in the ENERGY STAR database in the $30 \leq \text{CADR} < 100$ and $\text{CADR} \geq 150$ bins and about 16% of the models in the $100 \leq \text{CADR} < 150$ bin.

⁴ We note that the proposed ESME 2023 specification for room air conditioners has a sound-level performance requirement.

be important for purchasers. While there is typically more flexibility with unit placement than a room air conditioner (that is restricted to windows), we believe that RACLs are still likely to be located in proximity to room occupants.

We encourage EPA to consider adding separate requirements for standard-size chest and upright freezers like the separate requirements for top-freezer and side-by-side/bottom-freezer refrigerators.

Chest freezers use significantly less energy compared to upright freezers of the same volume. Our review of the ENERGY STAR and ESME freezers qualifying product lists (QPLs) on August 12, 2022 found that only five standard-size freezer models from two brands are listed as ESME. All five ESME freezers listed are upright models; no chest freezers are included on the list. Listed ESME models have volumes ranging from 11.4 to 14.3 ft³ and energy consumption ranging from 305 to 450 kWh/yr. The full ENERGY STAR QPL includes 58 products with energy efficiency at least 15% better than the federal standard, with energy consumption ranging from 305 to 580 kWh/yr. In contrast, standard-size chest freezers on the ENERGY STAR QPL have volumes ranging from 8.8 to 21.7 ft³ and energy consumption ranging from 198 to 346 kWh/yr. There are a total of 10 standard-size chest freezer models from 6 manufacturers. All of these models are at least 10% more efficient than the federal standard while using roughly 30-40% less energy than upright freezer models of the same volume. Using EPA's rationale for establishing a separate requirement for top-freezer refrigerators, "Top Freezers remain the lowest energy-consuming standard-size refrigerator-freezer product type,"⁵ we encourage EPA to adopt separate criteria for chest freezers of at least 10% more efficient than the federal standard for this lowest energy-consuming freezer product type.

We encourage EPA to consider increasing the stringency for maximum energy consumption and water consumption for residential dishwashers.

The most recent market report revealed that ENERGY STAR certified standard dishwashers have reached saturation, with 100% market penetration.⁶ EPA recently updated the ENERGY STAR specification (v7.0), which increases the stringency of the energy and water consumption criteria. In January 2023, certifying bodies will cease certifying dishwashers to the current v6.0 specification, and 6 months later the v7.0 specification will formally take effect.⁷ We note that the proposed ESME 2023 criteria are identical to the upcoming ENERGY STAR v7.0 specification. We are therefore concerned that the ESME proposal creates no meaningful distinction between the most-efficient and ENERGY STAR certified products. If it is not feasible to update the ESME criteria, we encourage EPA to consider removing dishwashers from ESME eligibility for 2023.

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<https://www.energystar.gov/sites/default/files/asset/document/ENERGY%20STAR%20Most%20Efficient%202023%20Proposals%20with%20Rationale.pdf>

⁶ENERGY STAR® Unit Shipment and Market Penetration Report Calendar Year 2020 Summary:

https://www.energystar.gov/sites/default/files/asset/document/2020%20USD%20Summary%20Report_Lighting%20%20EVSE%20Update.pdf

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<https://www.energystar.gov/sites/default/files/asset/document/ENERGY%20STAR%20Version%207.0%20Residential%20Dishwasher%20Final%20Specification%20Cover%20Letter.pdf>. p. 2.


We encourage EPA to consider only allowing residential heat pumps to be recognized by the ESME program. EPA could encourage the broader adoption of residential heat pumps through the ESME program by excluding central air conditioners (CACs) from eligibility. Heat pumps provide efficient electric space heating, often with some form of supplementary heat that is utilized only for a small portion of heating season hours. Meanwhile, as CACs only provide cooling, they are likely paired with a fossil-fuel-fired furnace that delivers 100 percent of a home’s heating needs. Currently, 62% of ESME 2022 models are CACs.⁸ We believe that the ESME program should not recognize equipment that continues to drive demand for fossil fuel heating when efficient electric options are widely available on the market.

Thank you for considering these comments.

Sincerely,



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Appliance Standards Awareness Project



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⁸3,536 CAC models and 2,125 heat pumps.
https://www.energystar.gov/products/most_efficient/central_air_conditioners_and_air_source_heat_pumps